

10/622,732

313/112, 113, 115

312, 512

Alan  
Cassano

## I claim:

(1) A modified high-brightness flat lamp structure comprising a reflecting plate with titanium dioxide and macromolecular polymer coated thereon, a plurality of UV light sources and a transparent substrate with macromolecular polymer and fluorescent powder coated thereon, said UV light sources being arranged in said reflecting plate, said transparent substrate covering said reflecting plate, UV light emitted by said UV light sources and reflected by said reflecting plate then exciting said fluorescent powder to radiate high-brightness visible light.

polyethylene  
polypropylene

6,340,824

Fig. 119, 124

#130

2. The flat lamp structure as claimed in claim 1, wherein said titanium dioxide and macromolecular polymer is coated on an inner wall of said reflecting plate.

3. The flat lamp structure as claimed in claim 1 and 2, wherein said reflecting plate is a reflecting plate capable of reflecting UV light.

4. The flat lamp structure as claimed in claim 1, wherein said reflecting plate is cavity-shaped.

5. The flat lamp structure as claimed in claim 1, wherein said macromolecular polymer and fluorescent powder is coated on an inner wall of said transparent substrate.

6. The flat lamp structure as claimed in claim 1, wherein said macromolecular polymer and fluorescent powder is coated on an outer wall of said transparent substrate.

7. The flat lamp structure as claimed in claim 1, wherein said UV light sources are UV lamp tubes.

Bahadur

6  
6,639,349 not relied uponFind art of resin + leading  
of resin eg. PolymerTiO<sub>2</sub>

8. The flat lamp structure as claimed in claim 1, wherein said UV light sources are UV light-emitting diodes. *Elediman 5,684,354 in Boerner et al 6,051,925*
9. The flat lamp structure as claimed in claim 1, wherein said transparent substrate is made of polymethyl methacrylate (PMMA) .
- 5 10. The flat lamp structure as claimed in claim 1, wherein said transparent substrate is made of polycarbonate (PC) . *West 6,607,286*
11. The flat lamp structure as claimed in claim 1, wherein said transparent substrate is made of polyethylene terephthalate (PET) . *Kaminsky et al. 6,583,936*
12. The flat lamp structure as claimed in claim 1, wherein said transparent substrate is made of quartz glass. *Hanelt et al. 5,827,449*
- 10 13. The flat lamp structure as claimed in claim 1, wherein said transparent substrate is made of sodium-containing glass. *soda glass. Troxell 5,646,479*
14. The flat lamp structure as claimed in claim 1, wherein said transparent substrate is made of boron-containing silicate glass. *5,092,672*
- 15 15. The flat lamp structure as claimed in claim 1, wherein said transparent substrate is made of lead-sodium-silicate glass. *CN 142 5621 .*

*prevents radiation  
UV rays  
vision fatigue*